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C O N F I D E N T I A L SECTION 01 OF 02 YEREVAN 001039

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SUBJECT: ARMENIA'S ENERGY FUTURE: STAYING NUCLEAR?

REF: 04 YEREVAN 382

Classified By: Amb. John Evans for reasons 1.4 (b/d).

SUMMARY

1. (C) In preparation for a June 22, 2005 donor conference on the Armenia Nuclear Power Plant (ANPP) decommissioning and replacement alternatives, Ministry of Energy officials outlined for us Armenia's long-term energy strategy. They made three main points:

-- There is no economic alternative to the continued operation of the Armenia Nuclear Power Plant (ANPP) until 2016;

-- Gas-fueled thermal power and nuclear power are the only viable base-load generation options to replace existing capacity as it is retired;

-- Armenia must maintain a balanced mix of generation, considering both the type of generation and the geographical source of fuel.

Blessed with few energy resources and faced with aging infrastructure, Armenia will struggle to replace the capacity of its deteriorating Soviet infrastructure, maintain its energy security, and keep energy prices reasonable. End Summary.

MINISTRY OF ENERGY: ANPP TO OPERATE UNTIL 2016

2. (C) According to Deputy Minister of Energy, Areg Galstyan, the GOAM plans to operate the Armenian Nuclear Power Plant (ANPP) until at least 2016, although they have set no firm decommissioning date. The economic consequences of closing the ANPP sooner, said Galstyan, would be severe. The ANPP has one working Soviet-era reactor that is Armenia's main base-load electricity generator and supplies 30-40 percent of Armenia's energy. Because its operating costs and tariff do not include the initial building costs which were paid by the Soviet government, or provide for decommissioning costs, it produces Armenia's cheapest electricity. According to PA Consulting, a USG-funded contractor that assists the Ministry, the difference in electricity costs if Armenia moved its nuclear generation to gas-fired thermal energy would be more than USD 100 million per year, under Armenia's current (Russian-subsidized) natural gas prices. PA Consulting estimates that decommissioning the plant and permanent fuel storage costs would cost an additional USD 800 million, more than Armenia's entire annual government budget.

3. (SBU) ANPP's VVER 230 (440 MW) reactor was closed for safety concerns following the devastating 1988 earthquake, but was restarted in 1995 amidst a severe energy shortage in Armenia. The EU pressured the GOAM to shut it down for good (the closure date was originally 2004), but Armenian officials have since backed out of the deal and said that the plant will operate until the country has alternative and diverse energy generation capacity (reftel). Since 1995, the European Union/TACIS and the USG, through the Department of Energy, have provided comprehensive technical upgrades and operational training to improve the near-term safety of the plant, including measures to mitigate damage in case of an earthquake. ANPP's main safety fault is still the lack of a containment dome to reduce the spread of radiation in the case of a disaster.

MINISTRY: GAS AND NUCLEAR ARE ONLY OPTIONS

4. (C) Looking towards the inevitable, if postponed, closure of the ANPP, Galstyan told us that the Ministry considers thermal and nuclear power the only viable base-load generation options for Armenia. Although Galstyan has actively pursued development of wind and hydro sources, he points out that these are not reliable year-round and their potential capacity cannot meet Armenia's consumption needs. The Ministry's primary strategy is to develop new thermal

generation capacity. Galstyan told us that, along with the ANPP, all existing thermal units will be more than 40 years old by 2015, and will be facing retirement. The Ministry is currently considering two projects to build new thermal power plants, one 402 MW combined cycle plant funded by the Japan Bank for International Cooperation and another project to complete a fifth unit at the Hrazdan Thermal Power Plant.

NEW NUCLEAR?

15. (C) According to Galstyan, a new nuclear plant would be a much more ambitious strategy for the cash-strapped Armenian government, but was the only thing that could justify early closure of the ANPP. He said the Ministry was looking into "the feasibility of doing a feasibility study" of building a new nuclear plant. Given Armenia's committed investment in gas infrastructure (notably, the USD 170 million gas pipeline to Iran and the two new thermal plants), a nuclear plant would be economically feasible, said Galstyan, only if Armenia could export significantly more electricity than it currently sends to Iran and Georgia. "Of course you could make a situation where it is feasible if you include Turkey," said Galstyan, shrugging. (Note: The 220 kV/300 MW line connecting Armenia and Turkey is currently disconnected. End Note.) Galstyan also claimed that, as a part of the feasibility investigation, Armenia would look at an extension package for the ANPP that allowed it to operate past 2016. He added that he thinks the extension package is too expensive to justify itself, but did not exclude the possibility.

16. (SBU) PA Consulting, a U.S.-based energy consultant to the GOAM, said that we should not dismiss Armenia as a candidate for a nuclear plant. According to PA, Armenia does not now nor would it likely in the future insist on control of the fueling process. The GOAM says that it would welcome international control and oversight over its nuclear fuel.

ENERGY SECURITY A MUST

17. (C) Besides replacement capacity, the GOAM insists that any energy solution must guarantee Armenia's energy security by maintaining diversity of sources. Were Armenia to shut down the ANPP with its existing energy infrastructure, 80 percent of Armenia's electricity generation would rely for fuel on a single poorly-maintained gas pipeline from Russia running through Georgia, a situation the government (understandably) finds untenable. The government has thus made the construction of the Iran-Armenia gas pipeline a priority to ease their vulnerability to regional disputes (such as Russia not wanting to supply gas through Georgia) or rapid changes in the price of gas.

COMMENT: PUSHING GOAM TO CLOSE ANPP WILL TAKE CASH

18. (C) Armenia's energy strategy has been consistent since the February 2004 EU-Armenia Working Group on ANPP when the Minister of Energy announced that the ANPP would not close as planned (reftel). Focused on security and capacity replacement, the Ministry will not ignore the forthcoming rise in energy-related costs. Unlike the inherited Soviet infrastructure, which operates at marginal costs, new thermal or nuclear plants will have to include in their tariff the costs of their entire lifecycle, from construction to retirement. To compound these costs, gas from Russia is likely to get more expensive. Armenia currently pays half the price that Russia charges Europe. Gas delivered from Iran will presumably be more costly, too, even if it is, as the Ministry claims, to be paid back in electricity. Meanwhile, the GOAM will have to finance the retirement of existing infrastructure, not least the decommissioning of the ANPP, which has not included its life-cycle costs into its tariff. One constant in Armenia's energy options is that energy costs are set to rise beyond what consumers can pay in tariffs and the government will likely need to cover long-deferred expenses. We expect that the government will raise cost concerns with donors on June 22, especially to the EU delegation who will presumably offer assistance in exchange for a closure date for the ANPP, as they did last February. When donors ask for change in Armenia's energy strategy, expect the Minister to ask donors for financial assistance in turn.

EVANS